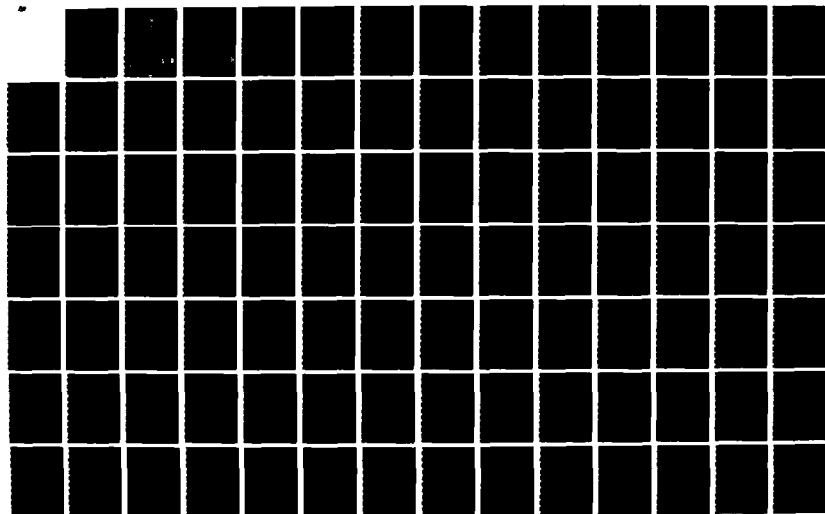
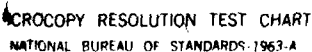


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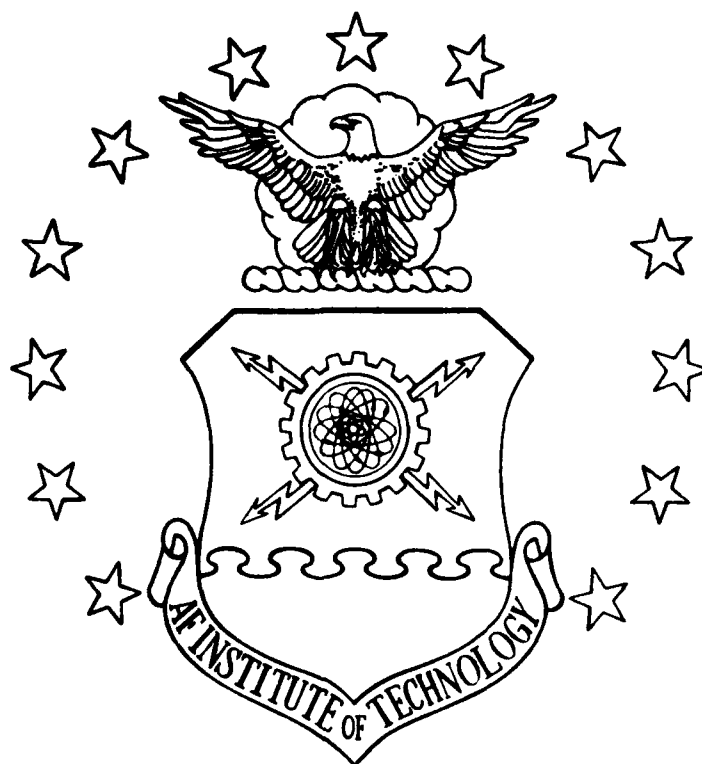




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ASSESSMENT OF THE TECHNICAL TRAINING
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SOURCE SELECTION PARTICIPANTS
IN AIR FORCE SYSTEMS COMMAND

THESIS

Charles E. Roberts
Captain, USAF

AFIT/GSM/LSY/86S-16

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ASSESSMENT OF THE TECHNICAL TRAINING RECEIVED BY SOURCE
SELECTION PARTICIPANTS IN AIR FORCE SYSTEMS COMMAND

THESIS

Presented to the Faculty of the School of Systems and
Logistics

of the Air Force Institute of Technology

Air University

In Partial Fulfillment of the

Requirements for the Degree of

Master of Science in Systems Management

Charles E. Roberts, B.S.

Captain, USAF

September 1986

Approved for public release; distribution unlimited

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Charles E. Roberts

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Abstract

→ Source selection is an important and complex part of the Air Force acquisition process and requires the skills and talents of many Air Force Systems Command (AFSC) personnel. This research assessed the preparedness of AFSC source selection participants. In particular, technical panel members were surveyed to determine how prepared they were for their participation in the technical evaluation of contract proposals. The key issues addressed were the preparedness of the source selection participants and the availability and benefit of source selection training.

This investigation was accomplished by sending a survey questionnaire to source selection participants in the six Air Force Systems Command product divisions. The results show that 75 percent of the technical panel members had not received any formal source selection training prior to their first source selection. The majority of the technical panel members felt technically qualified to accomplish the technical evaluation required during the source selection. However, they felt additional training on general source selection procedures would be beneficial. Key topics recommended for training included instructions on the application of evaluation criteria and standards, and instructions on completing source selection forms.

ASSESSMENT OF THE TECHNICAL TRAINING RECEIVED BY SOURCE SELECTION PARTICIPANTS IN AIR FORCE SYSTEMS COMMAND

I. The Research Problem

Introduction

The acquisition of major weapons systems in the United States Air Force is a very important and complicated process, and involves large expenditures of taxpayers' money. Congress, the Department of Defense, and the tax-paying public increasingly scrutinize the procurement process to ensure the Government purchases quality products at fair and reasonable prices. The process of evaluating contract proposals is a critical step in the Air Force procurement process. "There are a number of qualified sources in the United States that have prerequisite experience, capabilities, and facilities for the development and production of major systems and subsystems" (1:2). Because the potential need exists for evaluating large numbers of proposals for a given new system, the Air Force developed a process for evaluating proposals called Source Selection. Captain Robert Gray and Captain Jeffrey Hugo identified the lack of training for source selection participants in their thesis Weapon System Source Selection: An Assessment of Air Force Source Selection Approaches as a critical Air Force problem (7:6-2). This research will specifically identify the background and training of source

selection participants prior to their participation in the technical evaluation of a contract proposal.

Background

"The principle objective of the source selection process is to select the source whose proposal has the highest degree of credibility and whose performance can be expected to best meet the government's requirements at an affordable cost. The source selection process should be properly structured to balance technical, cost, management, and logistic considerations consistent with the phase of acquisition, program requirements, and business and legal constraints" (5:3).

Recent legislation has illustrated that Congress is very concerned about the issue of competition in government procurement. The increased emphasis on competition places added pressure on source selection participants to thoroughly evaluate each proposal. According to Smail and Simmons:

With the passage of the Competition in Contracting Act of 1984 (CICA), the Deficit Reduction Act of 1984, the Small Business and Federal Procurement Competition Enhancement Act of 1984, the Defense Authorization Act of 1985, the 98th Congress clearly mandated its intent to increase competition in government contracting by allowing fewer noncompetitive acquisitions. Thus it is anticipated that the number of competitive procurements will increase dramatically in the years to come [15:1].

The intent of the legislation is to ensure that all potential contractors be given a fair and equal opportunity

to compete. The objective of the source selection process is to ensure impartial and comprehensive evaluation of a contractor's proposal. The purpose of the technical panel is to evaluate the technical aspects of each proposal to determine which contractor will produce a system capable of meeting Air Force requirements.

Problem Statement

The Gray and Hugo thesis identified the lack of training received by source selection participants as being a general problem. They did not identify what training was available or whether source selection participants were aware of or would attend any training course. Often the technical evaluation of a contract proposal will require a high degree of technical expertise to even understand the proposal. Then the technical merits of each proposal must be analyzed. Therefore, a sufficient level of technical knowledge must be evident for the evaluation to be complete and thorough. My specific research question is: What specific training is required for participants in the technical evaluation of a contract proposal? What do people with previous source selection experience say is required of participants in the technical evaluation of a contract proposal? Is further technical training required, or is training in general source selection procedures needed? This research will attempt to answer these questions by conducting a survey of Source Selection Department Chiefs,

Source Selection Officers, and people that have participated in previous and on-going source selections.

Research Objectives

1. Determine if any general or selection-specific education was received by source selection participants prior to a source selection.
2. Determine what courses currently exist that specifically cover or include material on the source selection process.
3. Determine if a source selection training course would be beneficial to technical panel participants or source selection participants in general.
4. Determine the format and length of any source selection training course if the need for one is identified.
5. Determine the level of expertise required by regulation for membership on a technical panel.
6. Determine how technical panel members are chosen.
7. Determine how well prepared members of previous technical panels were for their responsibilities on the panel.

Scope and Limitations of Research

The majority of the Air Force's acquisition funds are spent by Air Force Systems Command (AFSC) Product Divisions, so the focus of this research will be on source selection personnel and training within AFSC. Procurements conducted outside of AFSC Product Divisions will not be considered.

During the source selection process a contractor's

proposal is evaluated under four basic areas of consideration: cost, technical, management, and logistics (2:21). These four areas are evaluated by panels comprising the Source Selection Evaluation Board (SSEB). The SSEB is responsible for the review and evaluation of each contractor's proposal against the solicitation requirements, the approved evaluation criteria, and the standards. The SSEB is typically organized as shown in Figure 1.1. The SSEB identifies any proposal deficiencies to the appropriate contractor and determines whether the proposals meet minimum government standards. All recommendations of the SSEB are reviewed by the Source Selection Advisory Council (SSAC). The SSAC is a group of senior government personnel appointed by the Source Selection Authority (SSA) to complete a comparative analysis of the results of the SSEB. The SSA is the individual designated to direct the source selection and make the final source selection decision (5:4).

This research will focus specifically on the training requirements for participants in the technical evaluation area of the SSEB (Technical Panel members in Figure 1.1).

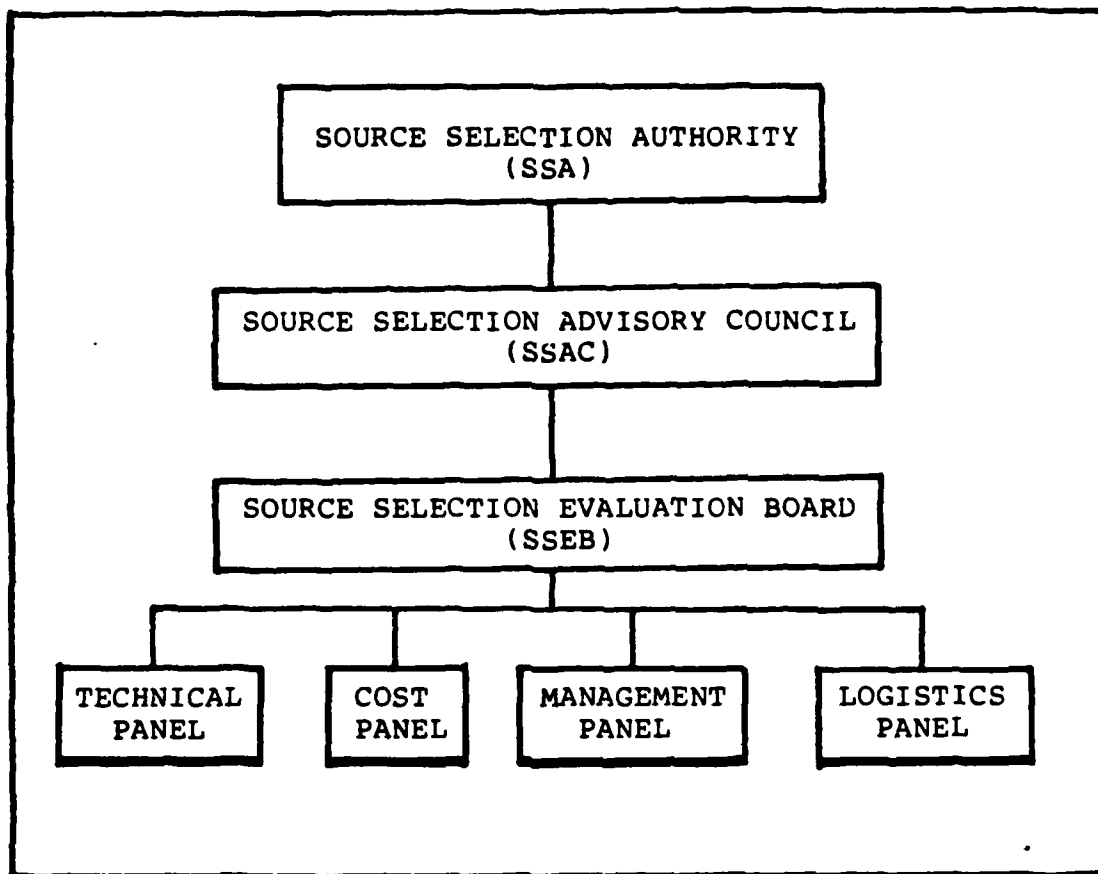


Figure 1.1. Source Selection Organization.

II. Literature Review

Introduction

The procurement of major weapons systems in the United States Air Force is a very complex and time consuming process. An adequate assessment of any training requirement for a particular phase of the process requires a basic understanding of the source selection process in general. Each procurement requires the development by the Air Force of the system's specifications and requirements, and involves coordination between many different Air Force agencies. "Once the Air Force is able to specify the desired system and define proposal evaluation criteria, potential contractors are notified by means of a 'Request for Proposal' (RFP)" (2:39). The RFP is the medium by which a contractor is introduced to the job desired by the government. It conveys a complete description of the work to be performed and allows the government to determine the capability and price of the contractor's efforts (2:39).

The Air Force uses the source selection process to evaluate each contractor proposal. All proposals received are considered, with the goal being to determine the company or companies best able to produce the system. The primary objectives of the source selection process are:

1. Maximize competition;
2. Minimize the complexity of the solicitation;
3. Ensure impartial and comprehensive evaluation of an

offeror's proposals; and

4. Ensure the selection of the source whose proposal has the highest degree of realism and whose performance is expected to best meet stated Government requirements [18:2].

Presently there are a variety of different approaches used to evaluate proposals during the source selection process. The two primary approaches are the "Conventional" approach and the "Four-Step" approach. The following is a brief description of the two approaches.

The Conventional Approach. The conventional approach consists of three main phases. In the first phase, the SSEB grades each submitted proposal against the established evaluation criteria. The functional panels (cost, technical, management, and logistics) perform an independent evaluation of each proposal and the results are summarized for the SSAC and SSA. In the second phase, the "competitive range" is determined. The competitive range includes all contractor proposals that fall within established minimum and maximum requirement levels. Only proposals that fall within the competitive range continue into parallel negotiations. Negotiation involves a bargaining process between the government and the contractor to "iron out" terms of the contract (8:60). During the source selection process the SSEB generates Deficiency Reports (DR) and Contractor Inquiries (CI) (2:63). A DR identifies a part of the proposal that does not meet the established minimum requirements or standards, and a CI requests additional

information or clarification concerning a part of the proposal. Once the negotiations are completed, the contractors are instructed to submit their "best and final offer" (14:I-1). Phase three involves analysis of the final contractor offers and selection of the winning contractor. The SSA chooses the proposal best meeting the government's requirements, the winning contractor is notified, and the contract is signed. All unsuccessful contractors are notified of the contract award.

The Four-Step Approach. The Federal Acquisition Regulation describes the Four-Step Approach as follows (18:15.613; 19):

Step One - Evaluation and Discussion of Technical Proposals. Technical proposals are solicited from all competing contractors and evaluated on how well they satisfy government requirements just as in the conventional approach. After the evaluations are completed, the unqualified bidders are eliminated.

Step Two - Evaluation and Discussion of Cost/Price Proposals. After the technical proposals are analyzed, the remaining contractors are required to submit cost/price proposals. A competitive range is established, and again a contractor can be eliminated from further consideration if his proposal falls outside this competitive range. During Step 2, discussions are held with the contractors to clarify portions of the proposal if necessary.

Step Three - Common Cutoff. In step three, a

common cutoff date is established for the receipt of all technical and cost/price proposal revisions. After the cutoff date, all remaining proposals are evaluated and a single contractor is selected to enter Step Four.

Step Four - Final Negotiations and Contract Award.

In Step Four, the government and the selected contractor negotiate a final contract acceptable to both parties. When an agreement is reached, the contract is signed and the unsuccessful contractors are notified.

The important point is the difference between the two procedures. The "Four-Step" process differs significantly from the "Conventional" method in that the offeror's technical and cost proposals are not submitted and evaluated simultaneously, definitive contracts are not negotiated with all offerors, and the apparent contractor is selected and announced prior to negotiation of a definitive contract (2:53). "In the four step process, proposal deficiencies are not revealed to the individual offerors. These deficiencies are disclosed and resolved during Step Four, Negotiations of a Definitive Contract" (2:53).

Source Selection Plan Preparation

The Air Force initiates the source selection process by generating a Source Selection Plan (SSP). The SSP is prepared prior to the release of the Request for Proposal, and outlines the course of action to be followed throughout the source selection process. The SSP also establishes the

standards and criteria to be used in evaluating contractor's proposals by identifying broad areas of the program such as logistics, management, operations, etc. and ranking the areas in order of relative importance to the program (2:22). The SSP controls the entire evaluation process and must be approved by the Source Selection Authority (SSA). "The SSA is responsible for the proper and efficient conduct of the entire source selection process encompassing proposal solicitation, evaluation, selection and contract award" (5:5).

Once the SSP is approved, the government issues the RFP which asks industry to submit contract proposals. After all the proposals are received, the individual panels comprising the Source Selection Evaluation Board (SSEB) evaluate the proposals against the previously established standards. This is a very important point; contractor proposals are evaluated against the established standards and not against each other. After the evaluation, the SSEB presents its recommendations to the Source Selection Advisory Council (SSAC). The SSAC reviews the board's recommendations and then submits the recommendations to the Source Selection Authority (SSA). The SSA makes the final selection, and the Contracting Officer executes the selected firm's contract for the government. The SSA also notifies the unsuccessful contractors that the contract has been awarded (2:19-27).

Conclusions of Gray and Hugo

Captain Robert Gray and Captain Jeffrey Hugo conducted

an investigation that examined the different approaches used in the Air Force source selection process. Their research surveyed the opinions of source selection personnel in an effort to determine the best approach for varying acquisition situations. Their results showed that the conventional approach was the overall preferred approach. Their results also showed that the personnel surveyed felt the technical aspects of a weapons system are adequately defined for the contractor in the Request for Proposal. Finally, and most important for this research, their results showed that 89 percent of the source selection personnel surveyed did not receive training prior to participating in their first source selection (7:4-10).

Gray and Hugo found that the lack of source selection training had a definite impact on the source selection process (7:6-2). They drew the following conclusions:

1. Air Force personnel are not receiving adequate training prior to source selection participation. Only 11 percent of the Air Force personnel surveyed received training before participating in their first source selection.
2. Formal Air Force training courses are not covering the source selection process in enough detail. Thirty-six percent of the source selection personnel surveyed have never attended formal training. Personnel gain the bulk of their source selection experience from on-the-job training and self study [7:6-2].

Gray and Hugo recommended that a comprehensive training course be established to cover all aspects of the source selection process. The course design should include source selection plan preparation, basic source selection forms,

and Air Force source selection philosophy (7:6-3). This research will focus on the specific training requirements for the technical evaluation of contract proposals.

Technical Evaluation of a Contract Proposal

Under the technical area of evaluation, the following criteria are used to evaluate the offeror's proposal:

1. Understanding of the technical aspects of the program.

The offeror must:

--Demonstrate an understanding of the purpose and scope of the program.

--Define trade-offs which will influence program decisions.

--Exhibit an understanding of technology availability, applicability, and limitations.

2. Risk assessment. The offeror must:

--Identify and rank performance, cost, and schedule risks and provide information on the risks and problem areas.

--Provide the rationale for selecting approaches with risk and identify acceptable alternatives to risk areas showing the relationship of technology risks to cost risks.

--Provide schedules for resolving risks on task sequence and overall program schedules.

3. Soundness of approach. The offeror must:

--Summarize the proposed approaches and justify the approaches by relating to tried and proven designs, methods

or procedures, and by demonstrating the feasibility and payoff of any new or innovative approaches.

--Demonstrate that the approaches used efficiently integrate the various disciplines and functional areas to meet program objectives and that tasks flow in a logical sequence and are properly prioritized.

--Demonstrate that adequate resources exist to accomplish the proposed effort (1:29; 17).

Color Coding

After assessing the offeror's data, the evaluator will apply the rating scheme prescribed in the SSP and rate each proposal in relation to the standards. Different coding schemes may be used depending on the level of evaluation during the source selection (e.g., colors, symbols, numbers). The standard color code scheme specified in AFR 70-15 and used most often is:

<u>COLOR</u>	<u>DEFINITIONS</u>	
Blue	Exceptional	Exceeds specified performance or capability in a beneficial way to the Air Force; high probability of success; no significant weakness.
Green	Acceptable	Meets standards; good probability of success; weaknesses can be readily corrected.
Yellow	Marginal	Fails to meet standards; low probability of success; significant deficiencies but correctable.
Red	Unacceptable	Fails to meet minimum requirements; needs a major revision to the proposal to make it correct [5:12].

The full range of ratings should be used so that the variances between proposals may be readily identified.

III. Methodology

Introduction

This chapter describes the methodology used to complete this research project. The research was conducted in three phases. The first (preliminary) phase involved telephone and personal interviews. The interviews were conducted to compile a list of experienced source selection personnel (the sample population) and to determine the availability of source selection training programs. The second phase involved a review of source selection records and reports, and a literature search to determine what, if any, source selection training was available. In the third phase, a mail survey was used to gather opinion data and demographic information from respondents concerning source selection training. Each phase is described in more detail below.

Phase I - Identify Survey Respondents

Telephone and personal interviews were conducted with Source Selection Department Chiefs in Systems Command Product Divisions to compile a survey response mailing list. An effort was made to contact the same respondents that Captain Gray and Captain Hugo contacted. A personal interview was conducted with Mr. Jim Helmig at the Aeronautical Systems Division and a telephone interview was conducted with Ms. Sheila Keeling at the Ballistic Missile Office. The rest of the product divisions were contacted by

mail, and asked to verify the survey mailing list obtained from Captain Gray and Captain Hugo. In addition, various respondents appearing on the mailing list were contacted and asked to provide the names of other source selection participants not included in the Gray and Hugo survey. This was done to increase the sample size and to ensure that experienced source selection participants were not overlooked. It was impossible to identify the entire population of interest due to time limitations and the transitory nature of the Systems Command job environment. Thus, the mailing list contained a representative, nonrandom, sample of the source selection population. The nonrandom (nonprobabilistic) sample was used for several reasons. First, the entire population could not be identified, thus eliminating the possibility of any random sampling. Second, the information needed required responses from people experienced in the source selection process.

In an effort to include participants in an on-going source selection, Major Scott Graham, the Technical Panel Executive Officer for the Advanced Tactical Fighter (ATF) Source Selection was contacted. He agreed to distribute 25 surveys to members of the technical panel. Respondents in an in-progress source selection were solicited, to assess the most current training received by the participants.

Phase II - Availability of Training

A literature search was conducted to determine the

availability of training programs covering source selection. In addition, during the personal interviews the respondents were questioned about the availability of source selection training courses in Systems Command. Air Force Institute of Technology (AFIT) Professional Continuing Education (PCE) course curriculums were reviewed to determine to what extent source selection topics were covered.

Business Management Research Associates Inc. (BMRA) of Arlington Virginia under contract to the Air Force Business Management Research Center (AFBMRC) at Wright-Patterson AFB conducted a study to determine the needs for source selection training. Their final report was used to provide background material and information on the availability of source selection training programs. A personal interview was conducted in Arlington Virginia with Mr. John Lynch of BMRA to discuss the results of their study. The BMRA study determined what source selection training programs were currently available in the Department of Defense, and recommended that source selection training courses be established (4).

Phase III - Mail Survey Questionnaire

A thirty-nine question survey was constructed, tested and sent to the 205 Systems Command Product Division respondents identified during Phase I of my research. The responses were analyzed using the SPSSx statistical package on the Academic Support Computer at AFIT.

Survey Construction and Mailing. A mail survey questionnaire was chosen as the primary instrument to obtain source selection training information. The mail survey was chosen for a number of reasons:

1. The large sample size precluded using another method (such as telephone interviews) because of time restrictions.
2. Personal interviews could not be conducted due to the diverse locations of Systems Command Product Divisions.
3. The mail survey was the least costly method in terms of manpower and time.
4. "Mail surveys are typically perceived as being more impersonal, providing more anonymity than the other communications modes" (6:172).

The survey questionnaire itself was originally comprised of three sections, a background/demographics section, a section containing general source selection questions, and a section containing questions for technical panel participants (10:132-143). The Air Force Survey Control Office, the approval authority for the survey, required that the survey be combined with a similar survey assessing the training requirements in the area of cost. Therefore, the final survey contained four sections, a background/demographics section, a section with general source selection questions, a section with questions for technical panel members, and a section with questions for cost panel members. The approved survey is included in Appendix B to this report. The questions used in the survey

were designed to assess the opinions and preferences of experienced source selection personnel on the topic of training for source selection participants. The questionnaire was tested prior to approval in an effort to improve the quality of the survey instrument. Several students in the AFIT Graduate Systems Management program completed the survey and provided comments and suggestions for improvement.

Administering the Survey. Once the Air Force Survey Control Office at the Air Force Military Personnel Center (AFMPC) approved the survey, a survey packet was prepared for each person on the mailing list. Each survey packet contained a cover letter, survey, and return envelope. A copy of the cover letter is contained in Appendix A. The cover letter requested that the surveys be returned within seven days of receipt; however, responses were accepted as late as three weeks after mailing.

Analysis of Results. The survey responses were analyzed using the SPSSx statistical package on the AFIT Academic Support Computer. The following is a brief overview of the statistical techniques used. The analysis will be explained in greater detail in Chapter IV - Findings and Analysis. As the survey responses were received, they were coded into an SPSSx data file by category of response -- cost, technical, or both. This was done to ensure that separate statistical analysis could be accomplished on each category of data.

Several statistical techniques were used to analyze the data. The techniques chosen were based on the level of measurement of the survey responses (9:1-22; 13:588-602). According to Emory, there are four widely used classifications of measurement scales: nominal, ordinal, interval, and ratio (6:87). The level of measurement is a function of the ordering and distance properties of the data. When nominal level data is used, the responses are partitioned into subsets or categories which are "mutually exclusive and collectively exhaustive" (6:87). Nominal level data includes the nominal level characteristics plus an indication of order (greater than or less than). All of the data associated with the survey responses was nominal (lowest level) or ordinal level, because the responses were primarily demographic and opinion data.

Two techniques were selected for analysis of the data: FREQUENCIES and CROSSTABS. "FREQUENCIES produces a table of frequency counts and percentages for the values of individual variables" (12:211). The FREQUENCIES procedure quickly tabulates the number of times each response occurs and displays the results in tabular form. The tables are used to determine how the responses are distributed. Once the distribution characteristics of the responses are known, analysis of the relationships between the data fields can be done. One procedure for analyzing these relationships is called CROSSTABS. CROSSTABS produces a contingency table which illustrates a row by column representation of the

frequency of occurrence between different categories of two data fields. "In a crosstabulation, the frequency distribution of one variable is subdivided according to the values of another variable" (16:87). CROSSTABS was used to examine the relationship between certain characteristics of the respondents and their opinions or preferences concerning different aspects of source selection training. For example, CROSSTABS would produce a contingency table of source selection experience by recommended length of source selection training. The table would have the experience level (number of source selections the respondent participated in) above the columns and the recommended length of source selection training courses (in days) down the side of the table. The intersection of a row and a column would contain a percentage of the respondents with a certain experience level who chose a certain length of training course.

Additional statistics, such as measures of central tendencies, were not generated because they are not applicable to nominal or ordinal level data. A oneway analysis of variance using the SPSSx technique ONEWAY was attempted on various data fields that could be interpreted as interval level data (dichotomies), however, no significant results were achieved (11:5).

IV. Findings and Analysis

Introduction

This chapter presents the findings of the three phases of research described in Chapter III and provides an analysis of those findings as they relate to the research objectives presented in Chapter I. Phase I of this research identified the respondents for the mail survey. Phase II involved a literature search to determine the available source selection training programs, and Phase III was the actual mail survey. The response rate, respondent background information, and the findings required to answer the research objectives are presented in this chapter. Each research objective's analysis contains the survey questions associated with the objective, and the statistical techniques applied to the question.

Phase I - Identify Survey Respondents

Through personal interviews, telephone interviews, and correspondence, 205 survey respondents were identified throughout the AFSC Product Divisions. These respondents had participated in the Gray and Hugo survey or had been identified by the various Product Divisions as having had some source selection experience.

Phase II - Availability of Training

A literature search was conducted to determine the availability of training programs covering source selection.

Overall, very little training exists specifically covering the source selection process. Several AFIT Professional Continuing Education (PCE) courses mention the source selection process as a means of selecting a qualified contractor, but do not cover the evaluation process in detail. No courses were identified that specifically provided training in the technical evaluation of contract proposals.

Phase III - Mail Survey Questionnaire

Once the respondents were identified, and the decision made to conduct a mail survey, the questionnaire was administered following these four steps:

1. the survey questionnaire was constructed;
2. Air Force approval to administer the questionnaire was obtained;
3. the survey was mailed to the 205 respondents; and
4. the responses were analyzed.

Step One - Survey Construction. The survey was constructed and tested during January through March 1986. Several modifications were made during this period based on comments received from the thesis advisor, other AFIT faculty, and other graduate students familiar with the source selection process.

Step Two - Survey Approval. Once the survey was completed, the survey approval request package was sent to the Air Force Survey Control Office. The approval process

took approximately six weeks, due in part to the Survey Control Office request to combine the cost and technical surveys. Survey approval was granted on 6 June 1986 and survey control number 86-79 assigned. The survey control number appeared on each survey cover letter.

Step Three - Survey Administration. A survey package consisting of the survey, the cover letter, and a return envelope was mailed to each of the respondents on 26 June 1986. The respondents were asked to complete the survey within one week of receipt; however, a cut-off date of 23 July 86 was established for return of the survey responses to allow for mailing and other delays.

Step Four - Analysis of Results. Since the survey questionnaire requires responses in four distinct sections, the analysis of the responses was also divided into four sections:

1. response rate and background;
2. general source selection;
3. analysis of cost responses; and
4. analysis of technical responses.

The first section presents the response rate and the demographic/background information of the respondents. The second section presents the respondents' opinions and preferences regarding the overall source selection process and training requirements. The third section on cost is not covered in this thesis but is presented in a thesis entitled An Assessment of Source Selection Cost Panel Members'

Preparedness by Captain Steven Babcock (3). The final section presents the respondents' opinions and preferences regarding the technical aspects of source selection and the corresponding training requirements.

The descriptive statistics in this chapter are presented in tabular form and several responses may be combined and included in the same table.

Response Rate and Background

This section contains a summary of the responses to Part 1 (Background) questions from the survey.

Response Rate. The survey was sent to 205 source selection personnel, and 124 returned a completed survey for an overall response rate of 60.5 percent. Sixty of the 124 respondents had been members of a technical panel. Table 4.1 and 4.2 summarize the response rate by Product Division and by Military Rank/Civilian Grade respectively.

TABLE 4.1

Product Division Response Rate

PRODUCT DIVISION	SURVEYS MAILED	COMPLETED SURVEYS	RESPONSE RATE (%)
ASD	94	61	64.9
ESD	44	27	61.4
SD	30	14	46.7
AD	22	11	50.0
BMO	11	8	72.7
OTHER	4	3	75.0
TOTAL	205	124	60.5

TABLE 4.2

Military Rank or Civilian Grade of Survey Respondents

RANK/GRADE	NUMBER	PERCENT OF TOTAL
COL	5	4.0
LTC	12	9.7
MAJ	8	6.5
CAPT	13	10.5
1LT	6	4.8
2LT	4	3.2
SES	2	1.6
GM-15	12	9.7
GM-14	14	11.3
GM-13	12	9.7
GS-14	1	.8
GS-13	12	9.7
GS-12	16	12.9
GS-11	1	.8
GS-9	1	.8
GS-5	2	1.6
No grade provided	3	2.4
TOTAL	124	100%

Background Information. Tables 4.3 and 4.4 summarize how familiar the respondents were with the various phases of the acquisition process and which type of acquisition they were most familiar with. Note that more than one response could have been chosen.

TABLE 4.3

Phase of the Acquisition Process the Respondents Were
Most Familiar With

ACQUISITION PHASE	NUMBER	PERCENT OF TOTAL *
Concept Exploration	32	25.8
Demonstration/Validation	53	42.7
Full Scale Development	85	68.5
Production	58	46.8
Other	10	8.1

* NOTE: Multiple answers were possible.

TABLE 4.4

Type of Acquisition Respondents Were Most Familiar With

ACQUISITION TYPE	NUMBER	PERCENT OF TOTAL *
Aircraft	37	29.8
Armament	13	10.5
Electronics	60	48.4
Space/Missile	28	22.6
Other	20	16.1

*NOTE: Multiple answers were possible.

Tables 4.5 and 4.6 show the current functional area of
the survey participants and their highest education level.

TABLE 4.5

Current Functional Area of Survey Respondents

FUNCTIONAL AREA	NUMBER	PERCENT OF TOTAL
Program/Project Mgmt	33	26.6
Contracting or Manufacturing Mgmt	34	27.4
Engineering	12	9.7
Configuration Mgmt	2	1.6
Program Control or Business Mgmt	6	4.8
Logistics	6	4.8
Test and Evaluation	6	4.8
Cost Analysis	13	10.8
Other	12	9.7
TOTAL	124	100%

TABLE 4.6

Education Level of Survey Respondents

DEGREE	NUMBER	PERCENT OF TOTAL
High School	7	5.6
Associate	3	2.4
Bachelors	38	30.6
Masters	64	51.6
Doctorate	12	9.7
TOTAL	124	100%

Tables 4.7 through 4.9 show the experience level of the survey respondents by illustrating the number of years of experience as well as the actual number of source selections and technical panels that the respondents have participated in.

TABLE 4.7

Years of Source Selection Experience

YEARS	NUMBER	PERCENT OF TOTAL
0-2	39	31.5
2-5	31	25.0
5-10	21	16.9
10-15	17	13.7
15-20	6	4.8
More than 20	10	8.1
TOTAL	124	100%

TABLE 4.8

Number of Source Selections Survey Respondents Have Participated In

NUMBER OF SOURCE SELECTIONS	NUMBER	PERCENT OF TOTAL
None	2	1.6
1 to 4	64	51.6
5 to 7	20	16.1
8 or greater	38	30.6
TOTAL	124	100%

TABLE 4.9

Number of Technical Panels Survey Respondents Have Been
A Member Of

NUMBER OF TECHNICAL PANELS	NUMBER	PERCENT OF TOTAL
None	64	51.6
1 to 4	39	31.4
5 to 7	11	8.8
8 or greater	10	8.1
TOTAL	124	100%

Research Objective 1

Determine if any general or selection-specific education was received by source selection participants prior to a source selection.

Survey Questions and Statistical Techniques. Survey questions 12 through 15 (see Appendix B for copy of survey) provided the responses necessary to answer the research objective. The SPSSx routine FREQUENCIES generated the percentage of occurrence of each response for the applicable question.

Findings and Analysis. Survey questions 14 and 15 assessed whether the respondents had received any source selection training prior to their first or subsequent source selection participation. Table 4.10 indicates that 28 of the 124 respondents (22.6%) had received some source selection training prior to their first source selection. Table 4.11 indicates that an additional 25 respondents received training prior to subsequent source selection

participation.

TABLE 4.10

Did Survey Respondents Receive Source Selection Training
Prior to Their First Source Selection?

RESPONSE	NUMBER	PERCENT OF TOTAL
Yes	28	22.6
No	96	77.4
TOTAL	124	100%

The majority of the respondents who answered yes to having received training prior to their first source selection (Table 4.10), received their training from the Product Division source selection office in the form of a briefing lasting less than one day.

TABLE 4.11

Did Source Selection Participants Receive Any Source
Selection Training Prior To Subsequent Source Selections?

RESPONSE	NUMBER	PERCENT OF TOTAL
Yes	25	20.2
No	73	58.9
No Response	26	21.0
TOTAL	124	100%

The majority of any subsequent training received by the respondents was also in the form of a briefing by the source selection office lasting less than one day.

Technical Panel Members. Sixty of the 124

respondents (48%) indicated that they had served on a technical panel. Fifteen of the 60 technical panel members (25%) received some formal source selection training prior to serving on their first technical panel. Sixteen technical panel members received training prior to a subsequent source selection. These findings are consistent with the overall sample population. In general, the findings of technical panel members were consistent with the findings of the overall sample population.

Survey question 12 determined the source of the respondents' source selection knowledge. A majority of the respondents indicated that they received their knowledge from previous source selections or through on-the-job training as indicated in Table 4.12.

TABLE 4.12

From What Source Did the Survey Participants Receive Their Source Selection Knowledge?

SOURCE OF KNOWLEDGE	NUMBER	PERCENT OF TOTAL *
Formal Training Course	7	5.6
On-the-Job Training	73	58.9
Self-Study Course	7	5.6
No Experience	3	2.4
Previous Source Selections	70	56.5
Other Sources	3	2.4

* NOTE: Multiple Answers were possible.

Table 4.13 presents the formal Air Force training courses that the respondents have taken that contain material on the source selection process. The majority of

the respondents have taken at least one course that contains material on the source selection process, however, none of the courses listed cover the source selection process or procedures in any great detail.

TABLE 4.13

Formal Air Force Training Courses Containing Source Selection Material that Survey Respondents Have Attended

TRAINING COURSE	NUMBER	PERCENT OF TOTAL *
None	60	48.4
Systems 200/400	15	12.1
Contract Administration (PPM 152)	13	10.5
Logistics Management (Log 224)	2	1.6
Government Contract Law (PPM 302)	20	16.1
Tech, Cost, Price Analysis (QMT 345)	14	11.3
Other Courses	25	20.2

* NOTE: Multiple answers were possible.

Research Objective 2

Determine what courses currently exist that specifically cover or include material on the source selection process.

A literature search and a review of Air Force Institute of Technology (AFIT) courses was conducted to determine the availability of courses covering the source selection process.

Findings and Analysis. Overall, very little training exists specifically covering the details of the source selection process. The following AFIT Professional

Continuing Education (PCE) courses cover the source selection process as a means of selecting a qualified contractor, but do not cover the evaluation process in detail.

1. Systems 200/400
2. Contract Administration (PPM 152)
3. Logistics Management (LOG 224)
4. Government Contract Law (PPM 302)
5. Technical, Cost, Price Analysis (QMT 345)
6. Advanced Topics in Acquisition Management (AMGT 655)
(AFIT Graduate School elective)

Business Management Research Associates Inc. (BMRA) under contract to the Air Force Business Management Research Center (AFBMRC) identified the following courses throughout the Department of Defense that include material on source selection (4:1-13).

<u>Title</u>	<u>Offered by</u>
Management of Defense Acquisition Contracts	ALMC, Ft. Lee
Defense Contracts Management for Technical Personnel	DMET (BMRA)
Source Evaluation Procedures	GSA
Contracting Specialist	ATC, Lowry AFB

In addition, AFSC and several of the product divisions have developed video tape presentations covering different aspects of the source selection process, however, the tapes are not widely used. Very few survey respondents indicated that the video tapes were used as a source of training.

Most of the respondents indicated that their training consisted of a briefing given by the Source Selection Office lasting less than one day.

Research Objective 3

Determine if a source selection training course would be beneficial to technical panel participants or source selection participants in general.

- . Survey Questions and Statistical Techniques. Survey questions 16, 35, 36, and 37 provided the necessary responses to accomplish this research objective. The SPSSx routines FREQUENCIES and CROSSTABS were used to analyze the responses. CROSSTABS was used to determine if the experience level of the respondents had any influence on how beneficial they felt a source selection training course might be.

Findings and Analysis. Table 4.14 indicates that 56% of the respondents would attend a source selection training course if one was available.

TABLE 4.14

Would Survey Respondents Attend a Source Selection Training Course if One Was Available?

RESPONSE	NUMBER	PERCENT OF TOTAL
Yes	70	56.5
No	54	43.5
TOTAL	124	100%

Table 4.15 is a contingency table showing the number of respondents willing to attend a source selection training course against the background variable experience. As expected, the more experience a respondent had, the less willing he was to attend training.

TABLE 4.15

Contingency Table - Source Selection Experience by
Willingness to Attend Source Selection Training

COUNT		I		I		I		I		I	
ROW	PCT	I		I		I		I		I	
COL	PCT	I		I		I		I		I	
TOT	PCT	I		I		I		I		I	
		YES	I	NO	I						
0-2 YRS			I		I						
		31	I	8	I			39			
		79.5	I	20.5	I			31.5			
		44.3	I	14.8	I						
2-5 YRS		25.0	I	6.5	I						
		18	I	13	I			31			
		58.1	I	41.9	I			25.0			
		25.7	I	24.1	I						
5-10 YRS		14.5	I	10.5	I						
		12	I	9	I			21			
		57.1	I	42.9	I			16.9			
		17.1	I	16.7	I						
10-15 YRS		9.7	I	7.3	I						
		6	I	11	I			17			
		35.3	I	64.7	I			13.7			
		8.6	I	20.4	I						
15-20 YRS		4.8	I	8.9	I						
		1	I	5	I			6			
		16.7	I	83.3	I			4.8			
		1.4	I	9.3	I						
> 20 YRS		.8	I	4.0	I						
		2	I	8	I			10			
		20.0	I	80.0	I			8.1			
		2.9	I	14.8	I						
COLUMN TOTAL		70		54				124			
		56.5		43.5				100.0			

Table 4.16 shows how beneficial a formal course covering the overall source selection process and specific procedures would be to technical panel members. The majority of the respondents felt that such a course would be beneficial to them.

TABLE 4.16

How Beneficial the Respondents Felt a Formal Course Would Be
In Providing Information on the Source Selection Process
and Procedures

RESPONSE	NUMBER	PERCENT OF TOTAL
1-Not beneficial	0	0.0
2 *	3	5.0
3-Somewhat beneficial	17	28.3
4 *	24	40.0
5-Very beneficial	15	25.0
No response	1	1.7
* NOTE: A five point Likert scale was used with headings for responses 1, 3, and 5.		
TOTAL	60	100%

Table 4.17 shows how beneficial technical panel members felt a contractor presentation would be in shortening the evaluation process or resolving proposal deficiencies. Such a presentation would not replace a formal course, but could be used to supplement a course by providing the necessary technical information during a specific source selection. Again, most respondents felt that a contractor presentation would be beneficial.

TABLE 4.17

How Beneficial Respondents Felt a Contractor Presentation
Would Be During the Technical Evaluation Process

RESPONSE	NUMBER	PERCENT OF TOTAL
1-Not beneficial	8	13.3
2 *	6	10.0
3-Somewhat beneficial	16	26.7
4 *	14	23.3
5-Very beneficial	14	23.3
No response	2	3.3
* NOTE: A five point Likert scale was used with headings for responses 1, 3, and 5.		
TOTAL	60	100%

Table 4.18 presents how beneficial a formal course providing specific technical background would be to technical panel members. In this case, most respondents felt that such a course would not be of much benefit to them. Based on the responses and comments received, most respondents felt that they would not be on the technical panel if they did not have the required technical background. Therefore, they felt that a formal course covering technical topics would be of little value to them.

TABLE 4.18

How Beneficial the Respondents Felt a Formal Course Would Be in Providing Panel Members the Required Technical Background

RESPONSE	NUMBER	PERCENT OF TOTAL
1-Not beneficial	13	21.7
2 *	12	20.0
3-Somewhat beneficial	13	21.7
4 *	11	18.3
5-Very Beneficial	8	13.3
No response	3	5.0
* NOTE: A five point Likert scale was used with headings for responses 1, 3, and 5.		
TOTAL	60	100%

Research Objective 4

Determine the format and length of any source selection training course if the need for one is identified.

The previous research objective showed that the majority of the respondents felt that a training course covering the general source selection process and procedures would be of benefit to them. This objective presents the respondents feelings concerning the content and length of a source selection training course and who should be responsible for conducting the training.

Survey Questions and Statistical Techniques. Survey questions 17 through 20, 38, and 39 provided the necessary responses to accomplish this research objective. The SPSSx routine FREQUENCIES was used to analyze the responses.

Findings and Analysis. Technical panel members were

asked whether or not the source selection schedule would allow for any courses to be conducted. Table 4.19 shows that the respondents were almost split in their opinions, however, a slight majority felt that the schedule would allow for some training to be conducted.

TABLE 4.19

Would the Technical Panel or Source Selection Schedule
Allow for a Training Course to be Conducted?

RESPONSE	NUMBER	PERCENT OF TOTAL
Yes	33	55.0
No	26	43.3
No response	1	1.7
TOTAL	60	100%

All of the the survey participants were asked what they felt the optimum length for any formal course should be. Table 4.20 shows the majority of the respondents felt that the length of any course should be held to one week or less. Nearly 40% of the respondents indicated that the optimum length for a source selection course should be 1-2 days. The responses of the technical panel members were consistent with the overall sample population. Twenty-six out of 60 respondents felt that 1-2 days would be the optimum length for a source selection course.

TABLE 4.20

Length of the Source Selection Course

LENGTH	NUMBER	PERCENT OF TOTAL
Less than a day	9	7.3
1-2 days	48	38.7
3-5 days	33	26.6
1 week	23	18.5
2 weeks	7	5.6
Other	4	3.2
TOTAL	124	100%

Table 4.21 presents what topics the respondents felt should be included in a source selection training course. A majority of the respondents indicated that all the topics listed should be included, but indicated a higher preference for including general source selection procedures and instructions on evaluating contractors' proposals. Again, the technical panel members' responses were consistent with the overall sample population.

TABLE 4.21

The Content of the Source Selection Training Course
Should Include

COURSE CONTENT	NUMBER	PERCENT OF TOTAL *
Instructions on the RFP	71	57.3
Instructions on Forms	61	49.2
General Source Selection Procedures	98	79.0
Instructions on Evaluating Contractors Proposals	98	79.0
Other	15	12.1

* NOTE: Multiple answers were possible.

Table 4.22 shows the source selection course format recommended by the respondents. Once again, the respondents indicated their preference for a course covering general source selection procedures.

TABLE 4.22

Format for the Source Selection Training Course

FORMAT	NUMBER	PERCENT OF TOTAL *
Selection specific (short course prior to specific SS start)	46	37.1
General (short course on general procedures)	69	55.6
Video or sound-on- slide presentation	21	16.9
Other format	6	4.8

* NOTE: Multiple answers were possible.

Table 4.23 indicates the respondents' preference for who should conduct the source selection training course. The majority of the respondents felt that the course should be conducted by the product divisions or the source selection office within each product division.

TABLE 4.23

Source Selection Training Course Should Be Given By

ORGANIZATION	NUMBER	PERCENT OF TOTAL
Product Division	44	35.5
Individual SPO	16	12.9
Source Selection Office	35	28.2
Other	29	23.4
TOTAL	124	100%

Research Objective 5

Determine the level of expertise required by regulation for membership on a technical panel.

Findings and Analysis. Air Force Regulation 70-15, Source Selection Policy and Procedures is the guiding directive governing the source selection process. This regulation states the general level of expertise required for membership on any panel comprising the SSEB. "The SSEB should be formed of fully qualified government personnel possessing the professional skills and knowledge required for an evaluation and assessment of offerors' proposals" (5:4). The regulation goes on to state:

Evaluators are expected to understand the requirement, the solicitation, the evaluation criteria, and the evaluation standards. They must also be well versed in their fields. When it is necessary to verify certain aspects of proposals outside their technical skill, evaluators are encouraged to engage in discussions with advisors, or other SSEB members [5:10].

Most technical panel members surveyed felt they had the required technical background to perform their duties (see Research Objective 3). This is consistent with the general requirement stated in the regulation that the evaluators be well versed in their field. The survey responses indicate, however, that although technical panel members are technically qualified, additional training covering source selection procedures (requirements, criteria, standards, etc.) would be beneficial.

Research Objective 6

Determine how technical panel members are chosen.

This research objective assesses how technical panel members are selected. Technical panel members were asked how they were selected for their responsibilities on the panel, and how they select members for technical panels if required to do so.

Survey Questions and Statistical Techniques. Survey questions 29, 30, and 31 provide the necessary responses to accomplish this research objective. The SPSSx routines FREQUENCIES and CROSSTABS were used to analyze the responses. CROSSTABS was used to determine if source selection experience had any influence on how people made selections for technical panels. For example, if a person had 10 years of source selection experience, did that affect the way he selected technical panel members?

Findings and Analysis. Table 4.24 presents the perceptions of the technical panel members on how they were selected for their technical panel responsibilities. The majority of the respondents indicated that their membership on the technical panel was due to a combination of factors including the training they received, their experience level, and their expertise in a specific area.

TABLE 4.24

How Individuals Were Selected for a Technical Panel

HOW SELECTED	NUMBER	PERCENT OF TOTAL *
Past experience	33	55.9
Education level	6	10.0
Training received	59	98.3
Expertise in specific area	37	61.7
Random selection	3	5.0
Only one available	7	11.9
Part of my job	42	70.0
Other	2	3.3

* NOTE: Multiple answers were possible.

Table 4.25 shows how the survey respondents select individuals for technical panels. Although technical competence was indicated most often by the respondents, one-third said that they rely on the recommendations of others. Thus, if a technical panel member performs well during a source selection, he or she may have a greater chance of being selected for another.

TABLE 4.25

How the Survey Respondents Select Individuals for Membership on a Technical Panel

HOW SELECTED	NUMBER	PERCENT OF TOTAL *
Technical background	38	63.3
Education level	5	8.3
Training received	7	11.7
Recommendation by others	20	33.3
Randomly	1	1.7
Other	12	20.0

* NOTE: Multiple answers were possible.

Table 4.26 indicates what the respondents felt would be the ideal way technical panel members should be selected. Again, technical background was listed as being the most important criterion, and reliance on recommendations by others was still considered highly credible.

TABLE 4.26

How the Respondents Felt Technical Panel Members Should Be Selected

SELECT BY	NUMBER	PERCENT OF TOTAL *
Technical background	55	91.7
Education level	6	10.0
Training received	19	31.7
Recommendation by others	25	41.7
Randomly	0	0.0
Other	5	8.3

* NOTE: Multiple answers were possible.

Research Objective 7

Determine how well prepared members of previous technical panels were for their responsibilities on the panel.

This research objective will assess how well prepared previous technical panel members were, and determine what they felt were the biggest problems they encountered.

Survey Questions and Statistical Techniques. Survey questions 21, 22, 32, 33, and 34 provided the necessary responses to accomplish this research objective. The SPSSx routines FREQUENCIES and CROSSTABS were used to analyze the responses.

Findings and Analysis. The survey participants were

asked that if they received formal source selection training, did that training adequately prepare them for their source selection responsibilities? This question was asked in an effort to assess the effectiveness and utility of existing source selection courses, as well as to determine the preparedness of the participants. Table 4.27 shows that the respondents were mixed in their opinions as to whether the formal training adequately prepared them for their responsibilities. The wide variety of responses makes suspect the effectiveness of existing source selection courses, and points to the need for a common comprehensive course throughout AFSC that combines the strengths of existing courses.

TABLE 4.27

Did Formal Training Adequately Prepare Respondents for Source Selection?

RESPONSE	NUMBER	PERCENT OF TOTAL
Stongly disagree	6	4.8
Disagree	8	6.5
Neither agree nor disagree	9	7.3
Agree	12	9.7
Strongly agree	2	1.6
No response (or no formal training received)	87	70.2
TOTAL	124	100%

Table 4.28 shows how well prepared the technical panel members felt they were for their responsibilities. Table 4.29 shows how well prepared the technical panel members

felt other members of the panel were for their responsibilities. It is interesting to note that in most cases the respondents felt that they were better prepared than the other members of the technical panel. In general, however, the majority of the technical panel members felt prepared for their responsibilities, and felt that their fellow panel members were prepared as well.

TABLE 4.28

How Well Prepared Were the Respondents for Their Responsibilities on the Technical Panel?

RESPONSE	NUMBER	PERCENT OF TOTAL
Unprepared	1	1.7
Somewhat unprepared	13	21.7
Neither prepared nor unprepared	6	10.0
Somewhat prepared	23	38.3
Well prepared	16	26.7
No response	1	1.7
TOTAL	60	100%

TABLE 4.29

How Prepared the Respondents Felt Other Members of the
Technical Panel Were For Their Responsibilities

RESPONSE	NUMBER	PERCENT OF TOTAL
Unprepared	3	5.0
Somewhat prepared	15	25.0
Neither prepared nor unprepared	12	20.0
Somewhat prepared	21	35.0
Well prepared	8	13.3
No response	1	1.7
TOTAL	60	100%

Table 4.30 and 4.31 present the respondents' opinions on what they consider to be the major problems encountered in the source selection process. Table 4.30 presents the opinions of the entire sample population, while table 4.31 presents the opinions of the technical panel members only. Nearly half of the overall sample population listed inexperience of the source selection personnel as being the biggest problem they encountered as a source selection participant.

TABLE 4.30

The Biggest Problem Encountered as a Source Selection Member

PROBLEM	NUMBER	PERCENT OF TOTAL *
Not aware of source selection procedures	24	19.4
Interpreting and filling out forms	11	8.9
Quality of contractor information	32	25.8
Time restrictions	28	22.6
Inexperience of source selection personnel	60	48.4
Not familiar with RFP	15	12.1
Other problems	17	13.7

* NOTE: Multiple answers were possible.

TABLE 4.31

What the Respondents Felt Were the Major Problem Areas in the Evaluation of Contractors' Technical Proposals

PROBLEM AREA	NUMBER	PERCENT OF TOTAL *
Development of standards	37	61.7
Interpretation of contractor proposals	21	35.0
Competence of participants	17	28.3
Unfamiliarity with technical panel procedures	13	21.7
Administrative problems (filling out forms)	13	21.7
No problems exist	4	6.7

* NOTE: Multiple answers were possible.

Table 4.32 presents the results of the SPSSx routine CROSSTABS. The variables examined are source selection experience versus preparedness for a technical panel. As expected, the more experience a respondent had, the better

prepared he felt he was for his technical panel responsibilities.

TABLE 4.32

Contingency Table - Experience by Technical Panel Preparedness

COUNT	I												
ROW PCT	I												
COL PCT	I											ROW	
TOT PCT	I	1	*	I	2	I	3	I	4	I	5	I	TOT
	I			I		I		I		I		I	
0-2 YRS	I	0		I	5	I	0	I	6	I	1	I	12
	I	0		I	41.7	I	0	I	50.0	I	8.3	I	20.3
	I	0		I	38.5	I	0	I	26.1	I	6.3	I	
	I	0		I	8.5	I	0	I	10.2	I	1.7	I	
	I			I		I		I		I		I	
2-5 YRS	I	1		I	3	I	3	I	7	I	4	I	18
	I	5.6		I	16.7	I	16.7	I	38.9	I	22.2	I	30.5
	I	100.0		I	23.1	I	50.0	I	30.4	I	25.0	I	
	I	1.7		I	5.1	I	5.1	I	11.9	I	6.8	I	
	I			I		I		I		I		I	
5-10 YRS	I	0		I	1	I	1	I	3	I	3	I	8
	I	0		I	12.5	I	12.5	I	37.5	I	37.5	I	13.6
	I	0		I	7.7	I	16.7	I	13.0	I	18.8	I	
	I	0		I	1.7	I	1.7	I	5.1	I	5.1	I	
	I			I		I		I		I		I	
10-15 YRS	I	0		I	3	I	1	I	3	I	2	I	9
	I	0		I	33.3	I	11.1	I	33.3	I	22.2	I	15.3
	I	0		I	23.1	I	16.7	I	13.0	I	12.5	I	
	I	0		I	5.1	I	1.7	I	5.1	I	3.4	I	
	I			I		I		I		I		I	
15-20 YRS	I	0		I	1	I	1	I	1	I	3	I	6
	I	0		I	16.7	I	16.7	I	16.7	I	50.0	I	10.2
	I	0		I	7.7	I	16.7	I	4.3	I	18.8	I	
	I	0		I	1.7	I	1.7	I	1.7	I	5.1	I	
	I			I		I		I		I		I	
MORE THAN 20 YRS	I	0		I	0	I	0	I	3	I	3	I	6
	I	0		I	0	I	0	I	50.0	I	50.0	I	10.2
	I	0		I	0	I	0	I	13.0	I	18.8	I	
	I	0		I	0	I	0	I	5.1	I	5.1	I	
	I			I		I		I		I		I	
COLUMN		1			13		6		23		16		59
TOTAL		1.7			22.0		10.2		39.0		27.1		100.0

- * 1 - unprepared
- 2 - somewhat unprepared
- 3 - neither prepared nor unprepared
- 4 - somewhat prepared
- 5 - well prepared

V. Conclusions and Recommendations

Chapter Overview

This chapter presents the conclusions that can be drawn from this research effort on the source selection process. The survey's large sample size and high response rate provide confidence that the results achieved are indicative of the entire Air Force source selection population. The numerous comments received (see Appendix C) demonstrate that the survey participants are genuinely concerned about improving the source selection process. The fact that the respondents took the time to complete the survey and provide their comments illustrates the importance of the source selection process to Air Force Systems Command and the Air Force in general.

The conclusions and recommendations are presented in three general areas -- preparedness of source selection participants, particularly technical panel members; benefit of a source selection training course; and format, content, and length of a source selection course.

Preparedness of Source Selection Participants

Conclusions. The following is a list of the conclusions drawn from the survey responses concerning the preparedness of source selection participants:

1. Source selection participants as a whole are not receiving adequate training on general source selection

procedures prior to their participation in the source selection process. Only 23 percent of the source selection participants responding to the survey had received training prior to their first source selection.

2. Technical panel members feel technically competent and adequately prepared to evaluate contract proposals; however, they require additional training on the specific source selection process and procedures.

3. In general, the majority of the survey respondents felt that the biggest problem encountered as a source selection participant was the inexperience of other source selection personnel.

4. The majority of the survey participants gained their source selection experience from on-the-job training or through participation in previous source selections. Thus, personnel may be assigned to a specific source selection for the purpose of gaining experience for future source selections, or just to learn more about the program.

Discussion. The lack of source selection training has a definite impact on the source selection process. The unfamiliarity with the general source selection process and specific procedures has diverted attention away from the important task of effectively evaluating contract proposals and caused unnecessary delays while the participants are informed of proper procedures. The comments received indicate that the evaluation process is frequently delayed or interrupted due to inexperienced or unqualified

personnel. Training beneficial to source selection participants would include: explanation of the RFP, instruction on filling out the source selection forms, explanation of the evaluation criteria and standards, and instruction on how to evaluate contractors' proposals.

The survey results indicate that the technical panel members feel they are technically qualified to evaluate a contractor's proposal. The majority of the respondents commented that they would not have been selected for the technical panel had they not possessed the necessary expertise. These results indicate that the technical panel members are effectively fulfilling their technical responsibilities during the source selection process. The technical panel members indicated, however, that a course covering general source selection procedures would be beneficial to them. Their responses were consistent with the overall sample population concerning the benefit of a source selection training course.

Recommendations. The following is the major recommendation based on the results of this study on the preparedness of source selection participants.

1. A comprehensive source selection training course should be developed. The course should explain the source selection process, structure, and procedures, and include topics ranging from the basic Air Force source selection philosophy to how to fill out the basic source selection forms. The course should emphasize tailoring the

source selection process to a particular program. The course should be made available throughout AFSC and taught in conjunction with any product division course currently available. The recommended specifics of the course are presented later in this chapter.

Benefits of a Source Selection Training Course

Conclusions. The following is a list of conclusions drawn from the research data concerning the benefits of a source selection training course.

1. By far, the majority of the survey participants indicated that a source selection training course would be beneficial to them.

2. Technical panel members who felt prepared for their duties indicated that a source selection training course would be beneficial to them, and provide them with a better overall understanding of the source selection process.

3. A source selection training course has the potential to reduce the length of the overall source selection process by better preparing the participants for their responsibilities.

Discussion. Nearly all of the respondents to the survey indicated that a source selection training course would be beneficial in some manner. Those who said they would not attend a training course if one was offered, had extensive source selection experience. Without exception,

these experienced people said that they would have attended a source selection training course earlier in their careers. In addition, these experienced people indicated that they would encourage any inexperienced personnel to attend a training course.

The source selection process is long and complicated. By better preparing the participants, the possibility exists to not only enhance, but shorten the process. Better prepared personnel in addition to improved, tailored procedures have the potential to significantly improve the source selection process throughout AFSC.

Recommendations. A source selection training course should be made mandatory for all first time source selection participants. Other personnel with some source selection experience should be encouraged to attend, but priority should be given to first time participants. Ideally, the course should be conducted as close to the start of the source selection as possible to maximize student retention.

Format, Content, and Length of a Training Course

Conclusions. The following is a list of conclusions concerning the development and presentation of a source selection training course.

1. The length of a source selection training course should be one week or less so as not to interfere with the source selection process.
2. The format for the course should be a general

short course similar to the AFIT continuing education courses.

3. The course should include but not be limited to the following: Air Force source selection philosophy, instructions on the SSP and RFP, general source selection procedures, color coding, and instructions on criteria, standards, and evaluating contractors' proposals.

4. The course should be conducted by a central organization to provide uniformity and continuity. The product division or the source selection office within the product division could sponsor the course in conjunction with previously established courses or briefings.

Discussion. The survey participants made very specific recommendations regarding the development and presentation of a source selection training course. These recommendations varied, however, due to the experience level of the respondents. Business Management Research Associates Inc. (BMRA) in their final report recommended that several courses be conducted that are tailored to the experience level of the source selection participants. The concept of tailored courses seems appropriate to ensure the proper level of training is received by all source selection participants. BMRA recommends four levels of training and/or briefing but, initially, two levels may be sufficient to provide source selection participants with the necessary training. The courses could be structured as follows: a five day short course covering general source selection

topics common to all AFSC product divisions, and a one day briefing/refresher course conducted by the individual product divisions covering selection specific topics and any changes or updates to the source selection process.

Recommendations. The following recommendations outline a suggested source selection training course format based on the survey responses and comments.

1. Two levels of source selection training should be established, a general course covering the entire source selection process for first time source selection participants, and a short one day course prior to a source selection for experienced source selection participants.

2. The general source selection course should last approximately five days and cover a wide variety of topics from planning to contract evaluation, to contract award. The course should be common to all AFSC product divisions and might best be taught by a traveling instruction team. The instructors could provide the course on a recurring or "as needed" basis. Air Force Systems Command, AFIT, or private contractor personnel might be considered as possible instructors for the course.

3. The short course for experienced source selection participants should last approximately one day and provide the attendees with specific information on the pending source selection. Any policy changes or updates to the source selection process could be covered, as well as a quick refresher on criteria, standards, preparation of

Deficiency Reports and Clarification Requests, etc.

Area for Additional Research

A pilot course as outlined above could be developed prior to an upcoming source selection. Personnel scheduled to participate in the source selection could be solicited to attend the pilot course on a volunteer basis. After the source selection is completed, the participants (both course attendees and non-attendees) could be surveyed to determine the benefit of the course.

Appendix A: Survey Cover Letter



DEPARTMENT OF THE AIR FORCE
AIR UNIVERSITY
AIR FORCE INSTITUTE OF TECHNOLOGY
WRIGHT-PATTERSON AIR FORCE BASE OH 45433-6583

REPLY TO
ATTN OF LSG (Capt Babcock/Capt Roberts, AV 785-6569)
SUBJECT: Source Selection Survey

TO:

1. This survey is a follow-up to a source selection survey conducted by Captain Bob Gray and Captain Jeff Hugo last June. It will measure your perceptions and attitudes concerning the cost and technical aspects of the source selection process, specifically the operation of the cost and technical panels. You are in a position to make an important contribution to this AFIT research project. The data collected may be beneficial to future source selection efforts.
2. Please take the time to complete the attached questionnaire and return it in the enclosed envelope within 7 days of receipt. Your individual response will be combined with other responses and will not be attributed to you personally.
3. Your responses to Captain Gray's and Captain Hugo's survey provided very valuable information and enabled them to complete an outstanding research project which was briefed to the Air Staff. Once again, your participation is completely voluntary, but we certainly appreciate your help.
4. The faculty advisor for this research project is Maj W.R. Hitzelberger AUTOVON 785-3355.

RICHARD T. TALIAFERRO
Head, Dept of Sys Acq Mgt
School of Systems and Logistics

2 Atch
1. Questionnaire
2. Return Envelope

USAF Survey Control Number 86-79

Expires 1 Oct 86

STRENGTH THROUGH KNOWLEDGE

Appendix B - Survey Instrument

SURVEY REGARDING SOURCE SELECTION
IN AIR FORCE SYSTEMS COMMAND

This survey will take approximately 25 minutes to complete. The survey contains four sections. The first section will provide background and experience information which will be used for grouping opinion data from sections two, three, and four. Your responses will greatly assist us in our analysis of the current feeling on the preparedness of source selection members. Please feel free to make additional comments as you fill out the survey.
THANK YOU FOR YOUR TIME AND COOPERATION.

Part 1 - Background Information

1. Military Rank or Civilian Grade: _____
2. Office Symbol: _____
3. AFSC Product Division:
 - ☐ ASD
 - ☐ ESD
 - ☐ SD
 - ☐ AD
 - ☐ Other (please specify)
4. With which acquisition phase are you most familiar:
(may select more than one answer)
 - ☐ Concept Exploration
 - ☐ Demonstration/Validation
 - ☐ Full Scale Development
 - ☐ Production
 - ☐ Other (please specify)
5. With which type of acquisition are you
 - ☐ Aircraft
 - ☐ Armament
 - ☐ Electronics
 - ☐ Space/Missile
 - ☐ Other (please specify)
6. Years of source selection experience:
 - ☐ 0-2 years
 - ☐ 2-5 years
 - ☐ 5-10 years
 - ☐ 10-15 years
 - ☐ 15-20 years
 - ☐ more than 20 years

7. Number of source selections in which you have participated:
8. Number of cost panels in which you have been a member:
9. Number of technical panels in which you have been a member:
10. Current Functional Area:
- ☐ Program/Project Management
 - ☐ Contracting/Manufacturing Mgmt.
 - ☐ Engineering
 - ☐ Configuration Management
 - ☐ Program Control/Business Mgmt.
 - ☐ Logistics
 - ☐ Test and Evaluation
 - ☐ Cost Analysis
 - ☐ Other (please specify)
11. Education (Highest degree awarded):
- ☐ High School Diploma
 - ☐ Associate Degree
 - ☐ Bachelors Degree
 - ☐ Masters Degree
 - ☐ Doctorate Degree

Part II - General Source Selection

12. From what source did you get the bulk of your source selection knowledge?
- ☐ Formal Air Force training courses
 - ☐ On-the-Job Training (OJT)
 - ☐ Individual Study/Correspondence Course
 - ☐ I have no experience in the source selection process
 - ☐ Through participation in previous source selections
 - ☐ Other (please specify)
13. What formal Air Force training courses have you attended that included material on source selection?
- ☐ None
 - ☐ Systems 200/400
 - ☐ PPM 152 Contract Administration
 - ☐ Log 224 Logistics Management
 - ☐ PPM 302 Government Contract Law
 - ☐ QMT 345 Quantitative Technical, Cost, and Price Analysis
 - ☐ Other (please specify)

14. Prior to participating in your first source selection, did you receive any formal source selection training? (If you answer NO, please skip to question 15)

☐ YES ☐ NO

14A. What type of training did you receive?

- ☐ Briefing
- ☐ Self-paced course or presentation (sound-on-slide)
- ☐ Formal course - Please specify
- ☐ Other (please specify)

14B. Who provided the training you received?

- ☐ Product Division
- ☐ Individual office or System Program Office (SPO)
- ☐ Source Selection
- ☐ Other (please specify)

14C. How long did your training last?

- ☐ Less than one day
- ☐ 1-2 days
- ☐ 3-5 days
- ☐ 1 week
- ☐ 2 weeks
- ☐ Other (please specify)

15. (If you answered yes to question 14, skip to question 16) Did you receive any source selection training prior to subsequent source selections (If you answer NO, skip to question 16).

☐ YES ☐ NO

15A. What type of training did you receive?

- ☐ Briefing
- ☐ Self-paced course or presentation (sound-on-slide)
- ☐ Formal course
- ☐ Other (please specify)

15B. Who provided the training you received?

- ☐ Product Division
- ☐ Individual office or System Program Office (SPO)
- ☐ Source Selection
- ☐ Other (please specify)

- 15C. How long was the training?
- ☐ Less than one day
 - ☐ 1-2 days
 - ☐ 3-5 days
 - ☐ 1 week
 - ☐ 2 weeks
 - ☐ Other (please specify)
16. Would you attend a source selection training course if one was available?
- ☐ YES ☐ NO
17. The content of the source selection training course should be:
- ☐ instructions on the Request for Proposal (RFP)
 - ☐ instructions on source selection forms
 - ☐ general source selection procedures
 - ☐ instructions on evaluating contractors proposals
 - ☐ other (please specify)
18. The length of the source selection course should be:
- ☐ Less than a day
 - ☐ 1-2 days
 - ☐ 3-5 days
 - ☐ 1 week
 - ☐ 2 weeks
 - ☐ Other (please specify)
19. The format for any formal course offered should be:
- ☐ Selection specific (short course prior to specific source selection)
 - ☐ General (i.e. AFIT or AFSC short course covering general aspects and procedures)
 - ☐ Video or sound-on-slide presentation (at local base)
 - ☐ Other (please explain)
20. The source selection course should be given by:
- ☐ Product Division
 - ☐ Individual office or SPO
 - ☐ Source Selection
 - ☐ Other (please specify)

21. If formal training was received, please complete this item. Formal training adequately prepared me for my source selection responsibilities. (circle appropriate number)

-----1-----2-----3-----4-----5-----
strongly disagree disagree neither agree agree strongly
disagree nor disagree agree

22. What was the biggest problem that you encountered as a source selection member?

- ☐ Not aware of the source selection procedures
- ☐ Unfamiliar with interpreting and filling out forms
- ☐ Quality of information provided by the contractor
- ☐ Time restrictions
- ☐ Inexperience of source selection personnel
- ☐ Not familiar with the RFP
- ☐ Other (please specify)

Part III - Cost Panel (Source Selection)

INSTRUCTIONS: Answer the questions in this section if you have participated in a source selection as a cost panel member.

23. How were you selected for your source selection responsibilities as a cost panel member?

- ☐ past experience
- ☐ education level or training received
- ☐ expertise in specific area
- ☐ random selection
- ☐ only one available at the time
- ☐ part of job responsibility
- ☐ other (please specify)

24. If you selected individuals for a source selection, how did you determine the members on the cost panel?

- ☐ cost background
- ☐ education level
- ☐ training received
- ☐ recommendation by others
- ☐ randomly
- ☐ other (please specify)

25. How prepared do you feel you were for your responsibilities on the cost panel? (circle appropriate number)

-----1-----2-----3-----4-----5-----
unprepared somewhat neither prepared somewhat well
unprepared nor unprepare prepared prepared

26. How prepared do you feel other members were for their responsibilities on the cost panel? (circle appropriate number)

-----1-----2-----3-----4-----5-----
unprepared somewhat neither prepared somewhat well
unprepare nor unprepared prepared prepared

27. Would additional training in the area of cost or cost analysis have been beneficial? (If you answer no, skip to question 28)

☐ YES ☐ NO

27A. In what areas concerning cost or cost analysis would additional training be beneficial?

- ☐ Source Selection cost considerations (realism, reasonableness, accuracy, etc.)
- ☐ Life cycle cost analysis
- ☐ Cost estimating
- ☐ Sensitivity analysis
- ☐ Risk analysis
- ☐ Other (please specify)

27B. The format for the additional training should be:

- ☐ short course prior to specific source selection
- ☐ Self-paced course (sound-on-slide, video etc.)
- ☐ Formal course
- ☐ Other (please specify)

27C. The additional training should be given by:

- ☐ Source Selection
- ☐ Individual office or SPO
- ☐ Product Division
- ☐ Other (please specify)

27D. The additional training should be:

- ☐ Less than a day
- ☐ 1-2 days
- ☐ 3-5 days
- ☐ 1 week
- ☐ 2 weeks
- ☐ Other (please specify)

28. What was the biggest problem that you encountered as source selection member on a cost panel?
- ☐ Not aware of source selection procedures
 - ☐ Unfamiliar with interpreting and filling out forms
 - ☐ Quality of information provided by the contractor
 - ☐ Time restrictions
 - ☐ Inexperience of source selection personnel
 - ☐ Not familiar with RFP
 - ☐ Other (please specify)

Part IV - Technical Panel (Source Selection)

INSTRUCTIONS: Answer the questions in this section if you have participated as a technical panel member.

29. How were you selected for your source selection responsibilities as a technical panel member? (mark all that apply)
- ☐ past experience
 - ☐ education level
 - ☐ training received
 - ☐ expertise in specific area
 - ☐ random selection
 - ☐ only one available at the time
 - ☐ part of job responsibility
 - ☐ other (please specify)
30. How do you selected individuals for membership on a technical panel? (If you do not select members for a technical panel, skip to the next question)
- ☐ technical background
 - ☐ education level
 - ☐ training received
 - ☐ recommendation by others
 - ☐ randomly
 - ☐ other (please specify)
31. How do you feel individuals should be selected for membership on a technical panel?
- ☐ technical background
 - ☐ education level
 - ☐ training received
 - ☐ recommendation by others
 - ☐ randomly
 - ☐ other (please specify)

32. How prepared do you feel you were for your responsibilities on the technical panel?

-----1-----2-----3-----4-----5-----
unprepared somewhat neither prepared somewhat well
unprepared nor unprepared prepared prepared

33. How prepared do you feel other members were for their responsibilities on the technical panel?

-----1-----2-----3-----4-----5-----
unprepared somewhat neither prepared somewhat well
unprepared nor unprepared prepared prepared

34. What do you feel are major problem areas in the technical evaluation of contract proposals?

- ☐ Development of the standards
- ☐ Interpretation of the contractor's proposals
- ☐ Competence of the participants
- ☐ Unfamiliarity with the technical panel procedures
- ☐ Administrative problems (filling out forms, etc.)
- ☐ There are no problems (or only minor ones) in the technical area

35. How beneficial would a formal course be in providing the required source selection background information (i.e. explaining the source selection process and specific procedures)?

-----1-----2-----3-----4-----5-----
Not beneficial-----Somewhat beneficial-----Very beneficial

36. How beneficial would a contractor presentation (plus question and answer session) be in shortening the technical evaluation process or resolving proposal deficiencies?

-----1-----2-----3-----4-----5-----
Not beneficial-----Somewhat beneficial-----Very beneficial

37. How beneficial would a formal course be in providing the required specific technical background prior to a technical panel review?

-----1-----2-----3-----4-----5-----
Not beneficial-----Somewhat beneficial-----Very beneficial

38. Would the technical panel or source selection schedule allow for any courses to be conducted?

- ☐ YES
- ☐ NO

39. If yes, the optimum length for a source selection course would be

- ☐ One day
- ☐ Two days
- ☐ One week
- ☐ Two weeks
- ☐ Other (please specify)

Part V. Please provide any additional comments that you may have:

THANK YOU FOR YOUR COOPERATION

Appendix C: Comments and Responses to Survey Questions

The comments listed in this appendix reflect the views of each survey participant as written and do not necessarily represent the views of the author or the position of the Air Force Institute of Technology or the United States Air Force.

Part I Survey Questions

Question 4: With which acquisition phase are you most familiar?

Major: Program Control
GS-12: FMS
GM-15: Modifications (both major and minor)
GM-14: Contractor Logistics Support
GS-13: C3I
GS-12: Deployment
GS-11: RFP preparation, source selection
Lt Col: A&CO/Deployment

Question 5: With which type of acquisition are you most familiar?

GS-17: Avionics Specifically
1 LT: Engines
1 LT: Simulators
GS-12: Training systems, radars
1 LT: Simulators
GS-12: Support equipment
Major: Simulators and training systems
Lt Col: Electro-Optics R&D
GM-13: Support equipment
GS-13: Avionics
GM-15: Technology demonstration

Question 10: Current Functional Area:

Captain: Legal
Lt Col: Staff Judge Advocate
Lt Col: Legal
2 LT: Executive Officer

PART II Survey Questions

Question 12: From what source did you get the bulk of your source selection knowledge?

GM-13: AFR 70-15 and practical experience
GS-12: School of hard knocks

Question 13: What formal Air Force training courses have you attended that included material on source selection?

GS-13: QMT 353, LOG 225
GM-13: Computer resource acquisition course
GM-13: DSMC, Financial Mgt for PM
Lt Col: AFIT (Master in Law in Federal Contract Law)
Col: DSMC
Lt Col: AFIT
Lt Col: DSMC

Question 14A: What type of training did you receive?

GM-15: Read AFR 70-15

Question 14B: Who provided the training you received?

GM-14: AFSC
Captain: Army JAG School
GM-13: Combination of Product Division and Procurement
GM-13: Contracting Officer

Question 14C: How long did your training last?

GM-14: 4 weeks

Question 15A: What type of training did you receive?

Captain: Read the regulations
Captain: Self-study
Col: OJT and DSMC
GM-13: Self taught with help from staff
Major: Self study

Question 15B: Who provided the training you received?

Captain: Self-taught
Captain: Staff Source Selection officer and my own efforts at self-study
Col: DSMC
GM-14: Cost analysis division staff
Major: Self initiative

Question 16: Would you attend a source selection training course if one was available:

YES RESPONSES

GM-14: More likely, would send people

NO RESPONSES

Col: Not at this point in my career

GM-15: I might send my people if course was meaningful
GM-14: Because now I teach them myself
GM-13: Would have previously
GM-15: Only because I'm retiring, otherwise yes
Lt Col: I'm retiring

Question 17: The content of the source selection training course should be:

GM-13: All of the above plus regulatory/policy familiarity
1 LT: Plus how the Government estimates interfaces with the RFP and its use within the briefing
GM-14: Instruction on writing up the evaluations
Lt Col: Tips on schedules, files organization, procedures for tracking CRs and DRs
GM-14: Developing evaluation standards
Captain: Mock source selection--to include evaluation of proposals
Major: Overview of PK role. Part of source selection training should be review of "lessons learned" from other source selections in recent past
GM-14: Strategies, negotiation skills, view from contractor's side, tricks of trade, etc. (real life)

Question 18: The length of the source selection course should be:

Major: Vary depending on experience of individuals--few hours for someone who has gone through it before; 1-2 days for first timer.
GM-14: Self-paced

Question 19: The format for any course offered should be:

GS-12: One, general, including cost, technical, and contractual aspects. Second, specific to the particular problem of acquisition.
Captain: Each product division should conduct specific training on source selection within that division.
Major: Must be local, geared to product division peculiarities; must be current and should address specifics of the individual program.
GS-13: Method of asking CRs/DRs and how to participate in negotiations
Lt Col: Suggest general AFIT/AFSC 2 week course then short 1-2 day course prior to specific source selection

Question 20: The source selection course should be given by:

No Rank/Grade: Combination from above
GM-14: Combination of product division and source

selection

GM-13: Seminar at each product division

GM-14: AFIT (better overall perspective)

Col: AFIT with lectures from product divisions and source selection personnel

GM-15: Functional offices AC/EN/PM, etc.

GM-15: Course should contain generic source selection guidelines by source selection and selection specific information by SPO

GM-14: Someone at product division who is knowledgeable and has practical experience

GM-13: AFIT or DSMC

GM-15: Formal AFSC course given by product division

GM-15: Functional Organization -- Engineering

Question 22: What was the biggest problem that you encountered as a source selection member?

GM-15: Almost everyone has never been through one before!

GM-14: Lack of specific formats required by SSA

Major: Changes in procedures midstream--numerous times

Captain: Panel chiefs continually changing formats and philosophies of the formal write-ups, thereby forcing workers to waste hours

GM-14: Restrictions on access to contractors

GM-15: Lack of quality can be both government and contractor's fault (i.e., unclear instructions on part of govt. or contractor ignoring instructions)

GM-13: The quantity of ridiculous procurement requirements made P/O Proposals extensive review of material to determine that applicable

GM-13: Imprecise guidance which tended to evolve during course of SS, thus inefficient and wasteful

GM-15: Not PMPS personnel but SPO personnel running the source selection (comment pertaining to inexperience of source selection personnel)

GS-13: General confusion and redundancy of effort. Not being familiar with the RFP was true of people outside of the SPO

2 LT: Quality of information provided by AFR 70-15

Col: Inexperience of source selection personnel. Especially those in supervisory positions that should be advising the younger members.

1 LT: All are problems

GS-13: Not being able to see cost figures. Incomplete process when you can't see all factors

GS-13: Establishing appropriate and consistent philosophy for evaluation

GS-13: Poor working conditions (heat, crowds, parking)

GM-14: Inexperience in establishing good evaluation criteria/standards

Lt Col: Awareness of significance of following

procedures to ensure legally OK award.

GS-12: What to evaluate in the proposal as opposed to what was required by the ITO (Section L of RFP)

Part IV Survey Questions (Technical)

Question 29: How were you selected for a technical panel?

Col: Program Manager of program in selection

Question 30: How do you select technical panel members?

Captain: SS experience

GM-13: Matrix engineer to SPO

GM-13: Head of project office nominates technical personnel

1 LT: Whoever is available

SES: Associated with the program

Col: Representatives of using Commands

Col: Past source selection experience

GS-13: Availability and familiarity with the program

Question 31: How should technical panel members be selected?

Captain: SS experience

GM-13: Matrix responsibilities

SES: Associated with the program

Question 34: Major problem areas in the technical evaluation of contract proposals:

GM-13: Personnel with other responsibilities not giving SS enough of their time.

GS-12: Evaluation against the ITO requirements

GS-13: Unclear definition of ratings and risk

SES: Requesting and reviewing too much irrelevant material

Lt Col: Keeping panel ratings consistent across all offerors

Lt Col: Awareness of the need to follow procedures precisely to avoid protests

1 LT: No real problems

Lt Col: Effect of strong personalities stifling dissenting opinions

GS-13: Usually cannot fully define contractors' performance requirements

GS-13: Not seeing cost data and the formality of the whole thing

Col: We spend our time evaluating a proposal that we don't put on contract.

Question 39: Length of source selection course:

GS-13: Standard video training on specific aspects available in source selection if needed

1 LT: One day for background on process, one day for technical background

Lt Col: 3-5 days

Col: 1/2 day

Part V. Other Comments

Captain: More formal training would be helpful. Source selection teams are rarely the same people. Always some new members on each team. Experience usually varies greatly. My training method largely consisted of gathering and reading all the pertinent regulations I could find.

GM-13: Because competitive acquisitions are accomplished in an environment where losing contractors may sustain a significant loss, we must do all that is possible to make sure all qualified offerors are treated equitably. This condition, in practice, limits the communication with industry during the source selection process. Because of this, I believe it is very important to have all source selection team members, technical and cost panels, familiar with the acquisition process prior to their assignment. It is not an environment where the contractor can be educating government evaluators who are new to the acquisition process and don't know the government's role in that process.

At SD, cost panel members are, for the most part, familiar with methods of determining fair and reasonable pricing. It is not that different applying these methods in a competitive or non-competitive acquisition.

The technical members, on the other hand, must have the knowledge of the product being acquired sufficiently mastered to enable evaluation of differing approaches taken by the competitors to supply the product. It is not appropriate for the winner of the competition to be selected on the basis of his marketing or educational abilities.

GS-14: The biggest problem I see is that each source selection seems to start from the beginning in terms of personnel knowledge. No one seems to know just what needs to be done. Most of the people involved are doing it for the first time.

Recommend that a source selection core team be established at each product division to oversee all source selections and to provide training and advice to those doing the work.

GM-15: ASD/ACC is responsible for chairing all 70-15 source selection cost panels where ASD/CC or above is the

SSA. We also generally provide the majority of the cost analysts assigned to the panel. ASD/ALT is responsible for the O&S portion of the cost panel evaluation.

ACC has solved the ongoing problem of lack of source selection experience by insuring that all cost panel chairmen (generally GS-12s to GM-14s) have participated in one or more source selections as a cost panel member before assignment as panel chairman. In addition, we routinely assign trainee cost analysts (GS-11 and below) under experienced cost panel chairmen as a part of their formal training (OJT) in the structured "comptroller training program." Successful participation in this training program is a necessary element in their promotion from GS-7 to GS-12. As the designated "AC source selection focal point" I am extremely interested in improving the process and look forward to your report.

GS-12: Source selections at SD are bound by too many unnecessary administrative details (e.g., preparation instructions which are too detailed for contents of decision document). The requirement for PMC and JA review of all request for BAFO's also is very time consuming.

1 LT: I think the whole source selection process should be reviewed with those who have been on the cost and technical teams as well as those who have received these briefings. Is the information contained within the briefing enough, too much, or just right? I feel a review by a group consisting of the above people should be accomplished at least every five years.

GM-14: A short cost panel course for "neophytes" that walked them through a mock proposal would be helpful. The course could consist of various problems encountered in proposal analysis (e.g., contractor spreads production \$ by expenditures rather than fiscal year buy, cost for WBS level III elements don't add up to the level II elements, etc.)

Major: Technical team members should be made aware of the requirements of the cost team--i.e., cost team can't perform risk assessment without technical input. Source selection members should be picked far enough in advance to allow them to become familiar with RFP. Members who are not directly involved with SPO should be briefed on the program objectives, the RFP, expected proposal structure--options/blocks, etc.

Formats/reports/briefing are all fairly fluid and every effort should be made to have the latest info available to SS team members.

GM-13: The most problematic areas in a source selection are the source selection plan (what are the criteria), the problem preparation instructions (What do you

want to know and evaluate) and the evaluation guide (how is the data evaluated). Once these three general areas are resolved, source selection is no more difficult than a regular acquisition. AFR 70-15 sets out the process so any training should be concentrated on these three areas.

GM-14: Lack of experience on every source selection is a severe handicap--and will continue to be, as no one wants to do them twice (and turnover ensures this). A short course of any kind, covering both procedures and practical aspects would help at least normalize the perception of what's to be done, and probably enhance the process.

GM-13: Training should be provided to all personnel working in a position that may be called upon to work on a source selection board. There is not enough time to schedule people for training and provide the training after they are picked for a source selection board.

Technical personnel should already have the technical training and experience in their respective areas of expertise prior to being selected for source selection boards.

GM-13: The best way to have meaningful and fast source selections is to reduce the RFP to a short concise requirement. The majority of the RFP is now legal/contractual garbage.

We could never operate this way during a wartime emergency and should not operate this way because of personnel without jobs sitting around levying rights.

GS-12: There should be (a) a video for basics, (b) instructions in tools and procedures to follow (i.e., form, schedules, lessons learned, shortcuts), (c) specifics for the acquisition in whatever depth seems appropriate, including identification of goals, team players, anticipated problems, milestones, review process.

GS-12: I have been on three source selection panels and am currently involved in my fourth. Each one has their own way of doing things, such as types of questions to ask on a CR or DR. This creates a lot of hassle and takes more time to learn how to do things "their" way.

Some of the SS board members do not understand configuration and, therefore, have a difficulty understanding what the contractor should have provided. It then turns out to be a training session because they do not feel comfortable with our decisions.

2 LT: ASD/PMPS should provide the training and supplies to SSEB and admin. officers to facilitate the source selection. Should help set up files, CD/DR process, reports, etc...instead of saying "look it up in AFR 70-15"--

which is a useless waste of paper.

Also, let's start putting this stuff on disks. One offeror offered to put their cost information on disks and provide a computer and printer to read it. ASD/PM said no. Too much time is wasted destroying 200+ bags of destruct and filing 200 books into files that no one will ever look at.

The SSAC is a waste. Either get them in for two weeks to write an analysis or write them out of AFR 70-15. Bigshots fly in for one day. Tell us we're wrong and to rewrite our findings, and then blab the information all over Washington.

The source selection facility is too small and the phones are obsolete. They provide little or no support. It is insane for people to bring up their own supplies and equipment and move it in and out when PMPS could maintain it. They also should provide administrative advice if not admin. officers outright.

GM-15: AFSC should develop a formal training course for first time source selection participants. The product division should develop an abbreviated course or briefing to be given before each source selection as a refresher course.

Captain: I am a newly appointed source selection officer. Also, I've only been in my current job six months. To date, I have not received any formal training nor have I participated in any source selections. However, I do have two in the near future. I strongly recommend that all new or inexperienced source selection officers receive formal training.

Lt Col: AFSC is the most non-professional command in the USAF. It hires engineers to do the business manager work with no enroute pipeline training on the acquisition process or specifics thereto. It is much like the USAF giving a guy an F-15 to fly around. If he likes it and doesn't crash and funds permit, he is sent to UPT. I wonder if management cares. SPOs are manned half-assed or otherwise indifferently except for the truly hi-viz projects like B-1. The taxpayers and the USAF are ill-served by AFSC. Can't run this business like a tactical unit, especially without pipeline training.

Lt Col: Training is badly needed--for evaluators, for administrative people, for area chiefs, item captains. Ideal would be to train for individual source selection, but that would be impractical. Might have general training spread over several days; 1st day general procedures and product division policies; remaining days in smaller sessions specifically for details of administration, area panel operations, etc. However, anything you do will be better than what exists.

Captain: One of the problems that exists on every source selection I've seen is a lack of understanding by the program office of the functions and responsibilities of the contracting office and cost panel proposal evaluation team. Program offices seek to dictate schedules without any insight into what reviews and steps are required prior to contract award. They seek to dictate what contract clauses are to be included in a contract, without any insight into FAR requirements. Program offices also try to dictate how line items will be structured without any knowledge of funding constraints, etc. All the above cause buying personnel to spend inordinate amounts of time explaining and arguing over items required by FAR. Because program managers misunderstand their roles in the source selection process, they tend to concentrate on choosing a successful offeror rather than presenting facts to the SSA.

Based on the above, I recommend that a specific course be structured for program managers alone, who serves as SSEB chairpersons. The program manager's roles should be clearly presented as one of managing the technical evaluation only. They should understand that contracting personnel are responsible for acquisition decisions affecting the RFP, model contract, and award schedules. A program manager (SSEB chairperson) course should include the following:

- Program manager roles and responsibilities
- SSEB organization
- Information control--efficient flow up and down of source selection information
- Source selection documentation requirements (forms): e.g., factors summaries, item summaries, CRs/DRs, PFNs, area summaries
- Documentation required in technical evaluations as proper inputs into the cost panel evaluation, e.g., hours, materials, etc.
- Proper review of CRs and screening of DRs, e.g., DRs must track to factors and standards and to a RFP requirement. Too often a program manager reinforces SSEB members when they cite deficiencies that don't track to a RFP requirement but to something they would have liked to have been a requirement. Also, the program manager should understand that all offerors are treated the same. DRs should not be given to only one offeror if they apply to others and vice versa.
- Competitive range--what it is and why it is used. Program managers at ESD seem to think a competitive range determination excluding offerors is only to be made if it supports the program schedule. They don't understand the legal and monetary ramifications of including or excluding offerors erroneously.
- Schedule management--program managers should be fully aware of all source selection briefing requirements, and reviews. Because it is the procurement community which normally takes all schedule heat, program office input into

schedule should be merely a statement of user needs and delay impacts.

A program manager (SSEB chairperson) training session should be given within each product division prior to conducting the SSEB training I recommended earlier. The program manager could then be tasked with organizing the SSEB and performing all his responsibilities at the mock session under supervision of trained instructors. This should be about a three day training course.

GM-15: Formal source selection courses are needed. Suggest contacting the source selection secretariats at AFSC product division for help in structuring such a course. Right now there is too much trial and error learning of the most important aspects of our acquisition business-source selection.

GM-14: Our problems at BMO in the training area stem from the lack of resources. I have been the source selection officer for the last six years (and assistant SSO for three years before that) but on a "catch-as-catch-can" basis.

GS-12: Preparation for source selection should start when the Statement of Work and the ITO are drafted.

Sequence of events:

1. PMD requirements identified
2. SOW identified and written to include PMD requirements
3. Draft Section "L" and "M" of RFP
4. Evaluation of requirements - Section "M" and check against Section "L"
5. Evaluate Section "L" of RFP (draft same time as section "M")
6. Develop Standards and Factors
7. Develop checklist for each factor
8. Review Source Selection Plan and procedures
9. Conduct training for source selection using:
 - lessons learned from other source selections
 - video tape of members in past source selections explaining strategy and methods
 - practice writing and using: SOW, RFP, ITO, CDRL, Standards/Factors, Evaluation forms, ASD forms 356, 357, 359.

2 LT: Source Selection is a very demanding time for the program office. Each member of the technical/cost team must be committed 100+% to the program's success and not exterior activities. The chain of command in a source selection must be followed exactly. The SSAC chairman reports to the SSA; the SSEB chairman reports to the SSAC chairman; and the Source Selection Executive Officer (SSEO) reports to the SSAC chairman and SSEB chairman. All of the

administrative aspects of the SS are the responsibility of the SSEO and he/she must have the proper authority to carry out his/her assigned tasks. However, rank often restricts the SSEO to accomplish these "firefighting" tasks. The SSAC chairman and SSEB chairman should allow the SSEO the freedom to use all of his/her resources to accomplish the SSEO mission: to effectively run the source selection.

GS-13: It is difficult to do or prepare for a joint program, DOD major program, with off-site evaluation sites! My experience is two source selections on INEWS -- a joint (AF-USN) DOD major program entering its Dem/Val phase.

Major: A formal course should be offered in two distinct phases. One phase prior to the preparation of the ITO, SS Plan, and SS standards. The second phase would occur just prior to the start of SS and would include all SS evaluators (using Command etc.). The ideal candidate for the responsibility would be PMPS (at ASD) or equivalent office.

Lt Col: My source selection experience has been in the lab, not at ASD. We didn't put people on the technical panels who wouldn't understand the technical issues -- they came prepared. Dialog with the contractor about his proposal (open, one-on-one) would have been great, but I don't know how we could have pulled it off. Consider short formal courses on selected topics during evaluation in case proposals go far afield from available expertise.

GM-13: My personal experience is that the source selection process is too compressed and does not allow for proper administrative procedures to be followed. Also, panel members are not 100% committed to the source selection activities, and the process is spread out. The combination of these two factors appear to create most problems.

GS-13: 1. Ninety-five percent of technical evaluations are "not used", i.e., only those few things that "poke-thru" the OK/Green (Ex. HI/LO risk items) get onto final briefing forms/item and area write-ups. Too bad that source selection activity is not focused on providing this 5%.

2. Local accepted norms of "chartmanship" drives (through backfitting) what gets reported -- i.e., the linkage of ratings and risks, and strengths/weaknesses. The above two items restrict the final evaluation verbage and charts. This should be included in the Regs. and thoroughly explained to technical members so they understand and can focus their efforts. Video tapes readily available to show short subjects would be nice. Source selection facility needs more typing help, more copiers, and a way to

make briefing charts etc. Maybe it's time to go mostly electronic instead of the massive amount of paperwork (4 to 5 thousand sheets for technical alone on my last source selection). One of our bidders offered to provide cost volume on floppy disk and provide computer and printer to read and make copies. The contract folks (PM) declined this offer.

GM-14: The general feeling that I have heard at ASD over the past 15-20 years is that the source selection process is too short for what is required of the individual. I believe the problem is that the individual is not prepared (trained) for the specific SS. Each are unique to some degree. Let's prepare our people.

SES: The keys to a successful source selection are:

- focus on the key issues (not all SOW/Spec requirements).
- use knowledgeable personnel who have a stake in the outcome (supplement by experts as required)
- keep the proposals short
- visit the offerors as part of the process.

GS-12: Panel chairpersons should be very knowledgeable program personnel and be well informed on the SPE, ITO and SOW BEFORE start of standard writing. Standards should be written before the ITO is finalized. SOW should state work effort but not specifically "how". Then proposed "how" can be evaluated and the better approach selected. SSEB Chairman, Panel Chairmen, and Admin should be required to report to the SS facility for a minimum of one week before evaluators report or proposals are received to set up, go over procedures, and become familiar with forms and SSEB requirements. ASD should cut out the quick-look briefing and as received briefing. Eliminate the SSAC or mandate that they do the comparison. Limit the number of pages a contractor can submit in response to a Deficiency Report or Clarification Report.

Several references within the survey regard educational level. If Standards are written well, educational level has no impact on the factor evaluations. Item Captains and Panel Chairmen should have the ability to write sound, concise, summary reports. Panel Chairmen need to be able to communicate effectively in writing and in face-to-face negotiations and discussions.

Lt Col: The need for strict adherence to procedures needs much emphasis. New laws can hold up a contract for months while a protest is resolved. If people do not follow procedures exactly, the agency might lose the protest and have to re-compete. Programs cannot usually stand these delays. People need to know what has to be done and make sure they do it correctly.

Col: The formal 70-15 approach of breaking evaluations down into items, factors, and subfactors causes evaluators to lose sight of the big picture and can lead to the wrong decision since interaction between "pieces" can be the critical item. The technical evaluation should be done by a small group of experts using very few (but critical) factors and standards. Each evaluator should read the entire proposal to get an integrated picture. For an example of how this can be done in reality see "Increasing Competition Through Streamlined Source Selections" in the May-June 86 issue of DSMC Program Manager magazine.

GS-13: Technical panel members for source selection are picked for their experience and technical expertise. No one wants a panel member that has just been "trained" for the source selection.

Major: Because technical panel members were selected based on their areas of expertise, technical knowledge was not a problem. Their most difficult problem was in filling out forms in proper formats, especially the Change Requests (CRs). The other serious problem was evaluator and advisors' supervisors not allowing their people to spend the required time evaluating. Home office work sometimes put the evaluation schedule behind.

GS-13: Everyone should attend a one day course explaining the source selection process in general if they have never been on a source selection. Before a specific source selection, the SPO should give a briefing on the specifics of that source selection (review standards, dates for write-ups, review SS organization, and anything unique to that source selection).

Col: In general, source selections are too long and go into too much technical depth since we essentially throw the proposal away when we are done with the source selection. The BMO has the best approach I've found; I suggest you contact them if you haven't already.

GS-12: In respect to the source selection rule of separating technical analysis from cost analysis at the panel and panel member level, I believe there is a severe error in procedural set-up. The two are linked in terms of technical and cost trade-offs and the analysis regarding the integrity of the proposal! This should be changed so accounting/financial and technical (i.e. engineers, logistical, etc.) can effectively work together in evaluating the probability of success given within proposed costs!

GS-13: It's my observation that those individuals producing source selection policy and procedures are not the

individuals with the kind of experience it takes to best accomplish this. Many commanders (especially ESD's) are annoyed at the time required to accomplish source selections, but instead of having experts revise the procedures and policies, they simply mandate accelerated schedules and smaller proposal page counts. There are many better ways to improve the source selection process but they are known by a handful of middle managers who have participated in multiple selections but feel their ideas will fall on deaf ears.

GS-11: Having a file on base that's kept very up-to-date with current program managers' and PCOs' phone numbers would save a lot of time (or even a central office for all bases to contact -- past performance seems to hold more weight these days!).

We (ESD) are currently experimenting with a "streamlined" source selection. However, just the technical area has been shortened -- cost takes the same amount of time, and also the reports (SSEB and SSAC) are still very lengthy. Maybe if these areas were streamlined too, source selection would be faster.

Capt: In general, the source selection process is an abyss that is a mystery until you are "fortunate" enough to have been a participant on one. Then you learn everything you need to know about it the hard way. You stumble and bumble your way through and eventually become an expert. What is needed is a permanent source selection staff agency that goes through all the wickets, having only technical experts assigned for each peculiar effort. After all, the rest is merely administrative and should not require novices learning this process all the time.

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Vita

Captain Charles E. Roberts was born on August 22, 1956 in Furstenfeldbruck, Germany. He graduated from Kaiserslautern American High School, Kaiserslautern, Germany, in 1974 and attended the University of Arkansas. He graduated in 1979 with a Bachelor of Science degree in Electrical Engineering, and was commissioned through the ROTC program in May 1979. His first duty assignment was as a test engineer with the 1815th Test and Evaluation Squadron at Scott AFB, Illinois and later at Wright-Patterson AFB, Ohio. In 1982, he was reassigned to Det 2, 1815th Test and Evaluation Squadron, Ramstein Air Base, Germany, as the Operational Test and Evaluation Branch Chief. He entered the School of Systems and Logistics, Air Force Institute of Technology, in May 1985.

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This research assessed the preparedness of AFSC source selection participants. In particular, technical panel members were surveyed to determine how prepared they were for their participation in the technical evaluation of contract proposals. The key issues addressed were the preparedness of the source selection participants and the availability and benefit of source selection training.

This investigation was accomplished by sending a survey questionnaire to source selection participants in the six Air Force Systems Command product divisions. The results show that 75 percent of the technical panel members had not received any formal source selection training prior to their first source selection. The majority of the technical panel members felt technically qualified to accomplish the technical evaluation required during the source selection. However, they felt additional training on general source selection procedures would be beneficial. Key topics recommended for training included instructions on the application of evaluation criteria and standards, and instructions on completing source selection forms.

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